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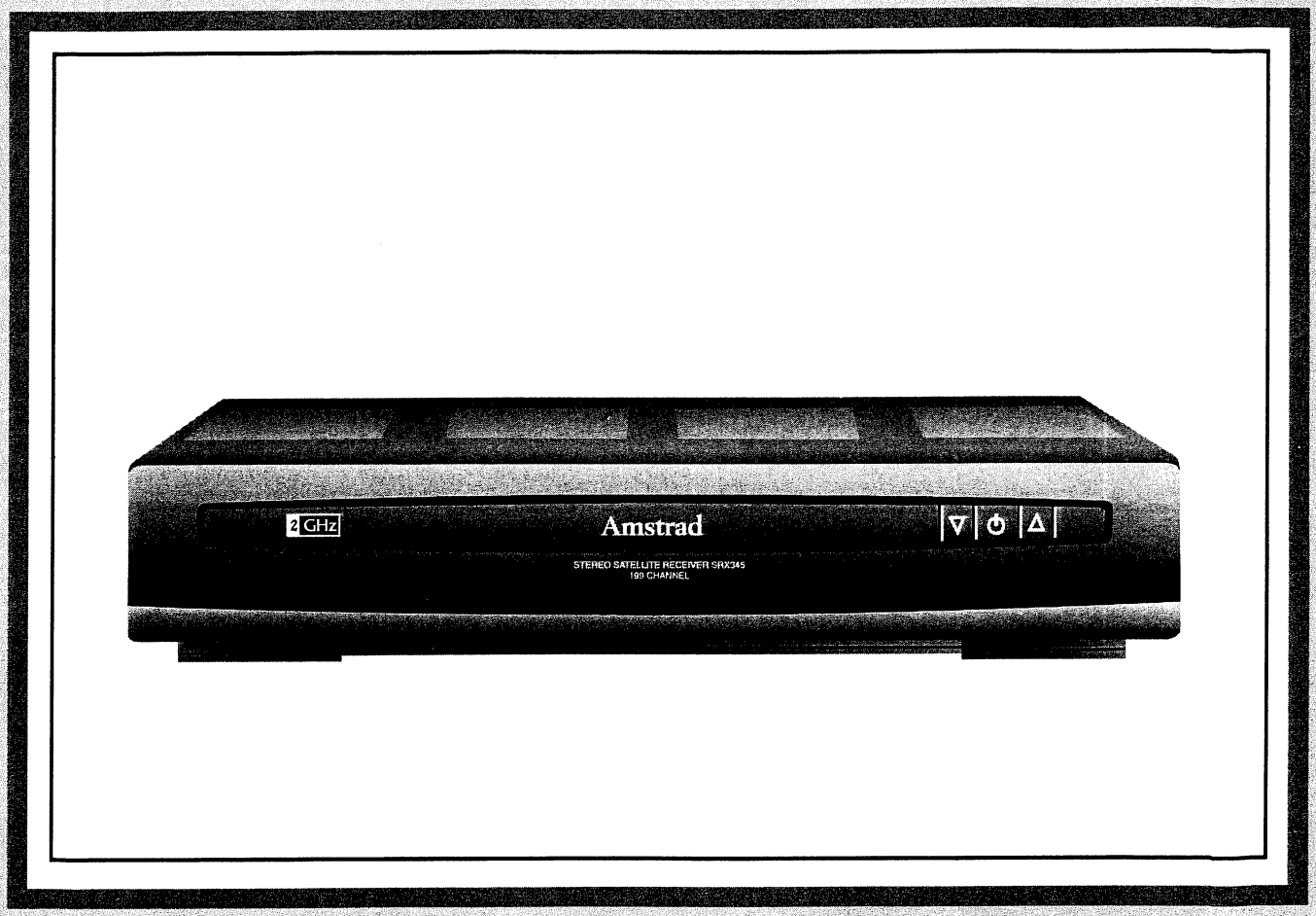
Amstrad



SRX345

SATELLITE RECEIVER

SERVICE MANUAL

87

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Date of First Publication April 1994.
Information published was latest available at the time of print.
Amstrad reserves the right to supply selective components.

SPECIFICATION

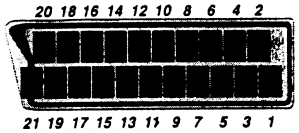
RECEIVER

Dimensions, weight	335 x 250 x 62mm, 1.9kg
Mains supply:	220-230V ac 50Hz
Tuning range:	700-2050MHz
Channel bandwidth:	27MHz
Local oscillator range:	0 and 9.3-12GHz
Fine tuning range:	±10MHz
Dynamic range:	-20 to -60dBm
AM co-channel interference threshold:	-15dBc typical
Threshold:	8dB C/N (with threshold extension)
RF output	Channel 38 (adjustable 30-40)
Audio subcarrier:	5.5-8.5MHz
Audio output level:	2V pk-pk at 50kHz input deviation
Audio response:	40Hz-15kHz
Input/output connectors:	LNB 75 ohms F-type
	RF 75 ohms coaxial (x2)
	AUDIO OUT RCA phono (x2)
	SCART/PERITEL 21-way
	DECODER 21-way

SLB3 LNB

Input frequency range:	10.70-11.80GHz
Output frequency range:	950-2050MHz
Local oscillator:	9.75GHz
Gain:	55dB
Noise figure:	1dB typical
Polarisation switching:	Electrical (13/17V)
Output connector:	75 ohms F-type

BACK PANEL SOCKETS



TV SCART/PERITEL

1	Audio out R	12	Serial interface (clock) †
2	Audio in R	13	Red ground
3	Audio out L	14	Serial interface ground †
4	Audio ground	15	Red*
5	Blue ground	16	Blanking*
6	Audio in L	17	Video ground
7	Blue*	18	Blanking ground
8	External switching	19	Video out
9	Green ground	20	Video in
10	Serial interface (data) †	21	Shield/ground
11	Green*		

DECODER

1	Audio out R	11	Green
2	Audio in R	12	MAC baseband out
3	Audio out L	13	Ground
4	Audio ground	14	(not used)
5	Ground	15	(not used)
6	Audio in L	16	(not used)
7	(not used)	17	Video ground
8	Audio/video $\overline{\text{INT}}$/EXT	18	(not used)
9	Ground	19	PAL baseband out (filtered/clamped)
10	PAL baseband out (unfiltered/unclamped)	20	Video in
		21	Shield/ground

* (not implemented)
† (dealer use only)

SAFETY TEST

Please note: when any work is carried out on a set, the following safety must be carried out to ensure continued electrical safety.

1) Flash Test:
Test at 4kV between the live and neutral of the mains lead joined together and ALL accessible metal points on the exterior of the set.

2) Insulation Resistance Test:
Test between the live and neutral of the mains lead joined together and ALL accessible metal points on the exterior of the set to show resistance of at least 4M ohm.

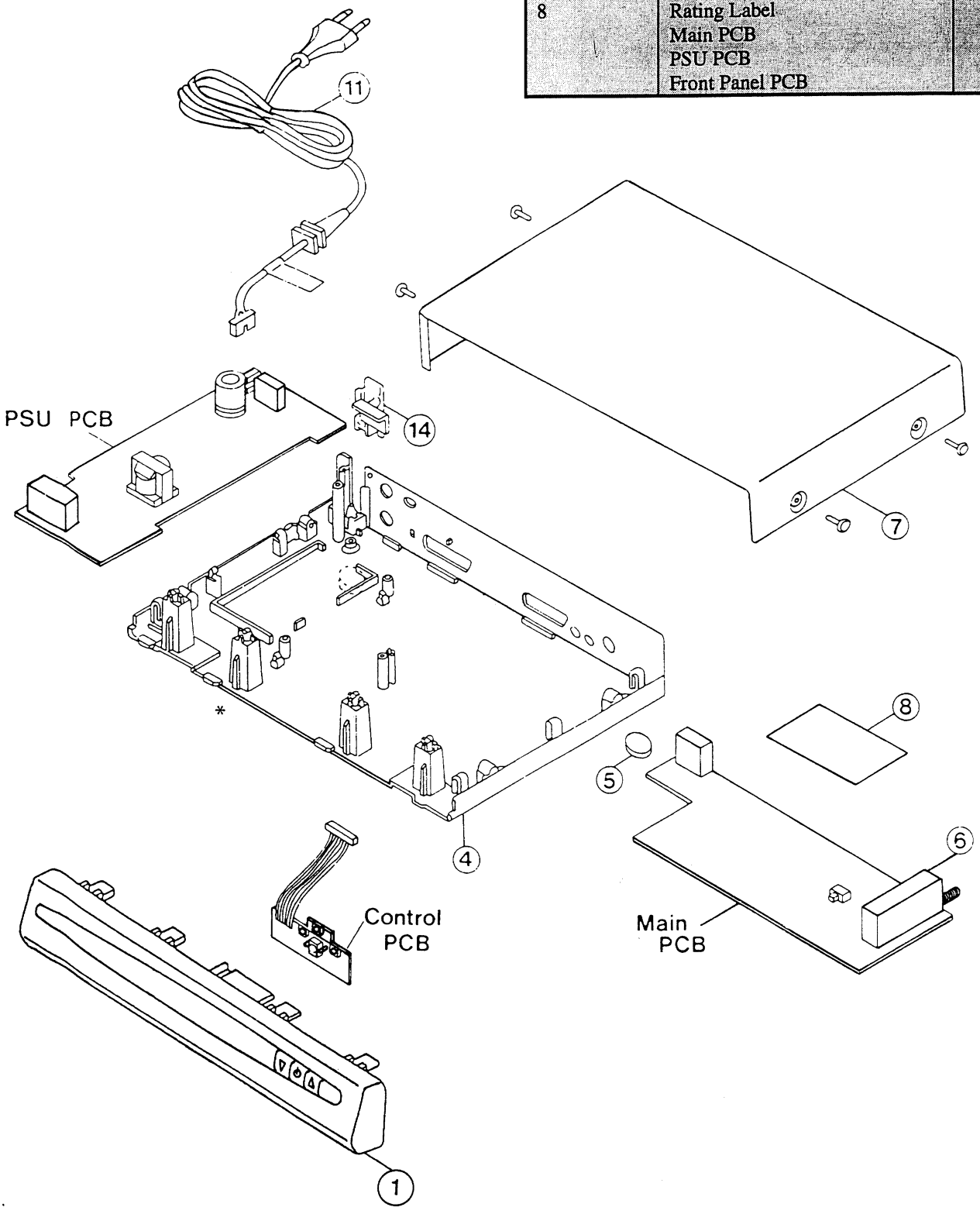
In keeping with our policy of continually improving our service and the technical quality of our products, we reserve thr right to change component type, manufacturers,sources of supply or technical specifications at any time.

Amstrad Plc.
BRENTWOOD HOUSE, 169 KINGS ROAD. BRENTWOOD ESSEX CM14 4EF

SRX345 Cabinet Parts List

Ref. No	Description	Pt.No
7	Top Cabinet	242155
1	Front Panel Assy	242308
4	Bottom Cabinet	241566
5	Foot Rubber Rear	241545
	Foot Rubber Front	
14	Rear Insert	240741
11 ⚠	Mains Cord	240861
8	Rating Label	
	Main PCB	
	PSU PCB	
	Front Panel PCB	

CABINET EXPLODED VIEW



* NOTE: Remove screw at the time of disassembly

Electrical Parts List

Ref No	Description	Pt.No
	ICs	
IC1,10	IC MC14053BCP	152353
IC2	IC TDA61602X	241395
IC3	IC LM1894N	241393
IC4	IC 24C16 EEPROM	242222
IC5	IC 68HC05D24 CPU V3.10	242315
IC6	IC 78L05AC Regulator	250009
IC8	IC UPD6450CX-002	241531
IC300	IC LM392	241544
IC500	IC 1S1U60L Ir Sensor	241529
IC600	IC CS3842A	241537
IC601	IC CNY17F-3X PC111L Opto C'pler	241539
IC602	IC TL431CLP Shunt Regulator	241538
	Transistors	
TR43	Tr DTC124ES	152050
TR2,4,7,8,10 11,14,15,17 19-22,26,29 31,32,34,37 38,40-42 300,302	Tr 2SC1740S 2SC945X	50016
TR44	Tr DTA114E	273263
TR1,3,5,6,12 13,16,18,25 27,28,30,33 36,301	Tr 2SA933S 2SA733K	150874
TR600	Tr MJF18004	240737
TR304	Tr 2SD313D	50005
TR303	Tr 2SB1143T	240037
	Diodes	
D1-6,603-605	D 1N4148	270754
D1	D BB609	241430
D7	DZ BZX55C 6.V8 500mW	240377
D8	DZ 27V 500mW	241233
D600	D DF10M Bridge	241403
D303	D FE1A	241406
D602,606	D RGP10D	241633
D607,608	D RL2Z	240733
D601	D IN4005	241402
D4	DZ 5.1V 500mW	240815
D501	LED Red SLP030RA	241631
D500	LED Green SLP030GA	241632

Ref No	Description	Pt.No
	Coils	
L8	Coil 10µH	
L1,13	Coil 100µH 1404AE	
L12,13	Coil 100µH 1041D	
L16	Coil 100µH Choke 10457	
L7	Coil 1.2µH	
L10	Coil 1.8µH	
L9	Coil 18µH	
L3	Coil 3.3µH	
L11	Coil 33µH	
L601,602	Coil 33µH Choke	
L2	Coil3.9µH	
L4,5,14	Coil 8.2µH	
L300	Coil 330µH Toroidal	241636
T600 ⚠	Tx µains Switching LLP007TH	242224
L600 ⚠	Line Filter 39µH Toroidal	241637
	Miscellaneoms	
SK2,4	Scart Socket	153030
	Remote Control Handset	241568
	CATV Cable 3C-2W	153048
	Carton	242309
	Polypacking	241629
	User Instructions	242310
S500	Tact Switch	240860
	Tuner Assy 1500-P2 Shield Metal IR Sensor	242177
FS600 ⚠	Fµse 1.25A (T)	240083
VR1	VRSF 10K Ω linear	240710
VR1	VRSF 500 Ω 50100 PSU	241638
C91	Trimmer Cap 40pF	24
XL11	Crystal 17.73447MHz	241640
	Crystal 4.0MHz	254427
IC7	RF Modulator CH30-40 5V	242178
XL7	Ceramic Discri. CDA10.52MG38V	240077
XL2,4	Cer. Filter SFE10.52MJA10-A	241028
XL8	Ceramic Discri. CDA10.7HG38V	240076
XL1,3	Ceramic Filter SFE10.7MJA10-A	241027
SK5	Phono Jack Red White	240798
	Slide Switch	240800

ALIGNMENT INSTRUCTIONS

NOTE:
Electrical adjustment is required after replacing certain components and certain mechanical parts. It is important to perform these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.
NOTE: This flow chart indicates, the electrical adjustment step.

TEST EQUIPMENT REQUIRED

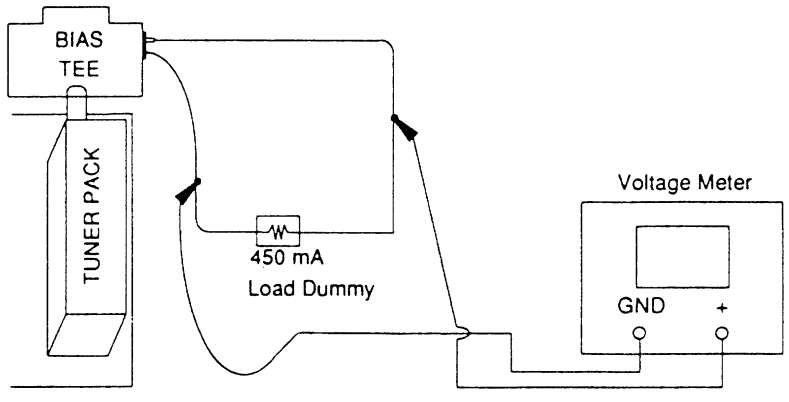
1. Oscilloscope: Dual-trace with 10:1 probe,
   V-Range: 0.001~50v/Div.,
   F-Range: AC~DC-20MHz
2. PAL Pattern Generator
   (Color bar with 100% white)
3. AC Voltmeter (RMS)

1. LNB Voltage Adjustment

Purpose:
To separate receiving signal into horizontal and vertical polarisation.
Symptom of Misadjustment:
Receiving signal is not separated into horizontal and vertical correctly.

Test Point	Adj. Point	Mode	Input
LNB Voltage LNB: 450mA Load LNB Polarity: H (+17V)	RV1 (PSU PCB)	—	—
Tape	M. EQ.	Spec.	
—	Voltage Meter	H: 17.2~18.0V (V: 12.8~14.0V)	

Connections of M. EQ.



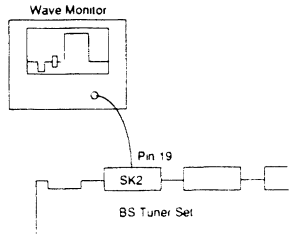
Reference Notes:
1. Check that LNB Polarity is "H" on the step 1 (Vp-p Voltage Adjustment).
2. Connect equipment as shown in the above table.
3. Adjust RV1 to obtain 17.6V LNB Voltage.

2. Video Level Adjustment

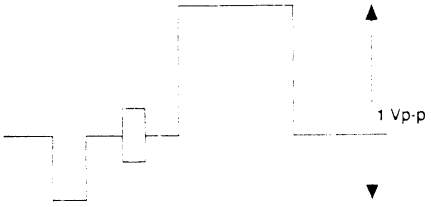
Purpose:
Adjust Contrast level of video signal at TV Scart/Modulator output.
Symptom of Misadjustment;
Display will be too dark or too bright.

Test Point	Adj. Point	Mode	Input
SK2 Pin 19 LNB: 450mA Load LNB Polarity: H (+17V)	RV1 (Main PCB)	—	CH8: 1317.5MHz, White 100%, RF= -45dBm, C/N= Max
Tape	M. EQ.	Spec.	
—	Wave Monitor	Video Level: 1Vp-p±0.5Vp-p	

Connections of M. EQ.



Figure



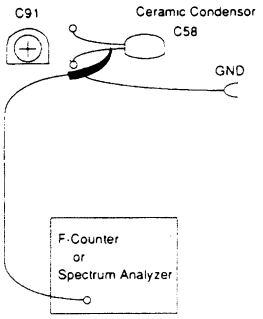
Reference Notes:
1. Input CH8: 1317.5MHz, White 100%, RF=-45dBm, C/N=Max.
2. Connect the signal from SK2 Pin 19 to Wave Monitor.
3. Adjust RV1 (Main PCB) to obtain 1Vp-p.

3. OSD Freq. Adjustment

Purpose:
To adjust frequency of OSD (On Screen Display) control signal.
Symptom of Misadjustment:
OSD may be not distinct or colour background may be grey.

Test Point	Adj. Point	Mode	Input
C58 LNB: 450mA Load LNB Polarity: H (+17V)	C91	—	—
Tape	M. EQ.	Spec.	
—	Spectrum Analyzer or F-Counter	OSD Freq.: 17.734475MHz±200Hz	

Connections of M. EQ.



Reference Notes:
1. Push "TIMER" key on the Remote Control to place units in TIMER mode.
2. Connect equipment as shown in the above table.
3. Adjust C91 to obtain 17.734475MHz.

5. Clamp Level Adjustment (with 450mA LNB load)
Adjust RV3 to achieve 1.85V at the Jn. of RV3 & R5.
Note: This allows maximisation of video ADC input.

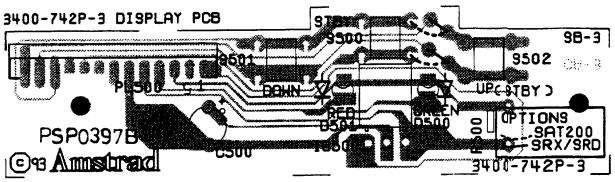
Description	Ref. No.	Pt.No.
	Resistors 1/6w	
	Unless stated differently	
0.91 Ω 1/2w	R308	
2.2 Ω 1/2w	R610	
4.7 Ω 1/2w	R609	
27 Ω 1/4w	R32	
75 Ω	R110,115	
75 Ω 1/4w	R54-56,84,129	
100 Ω	R35,36,59,60,73,76,116,120,121 123,165,307,500	
100 Ω 1/4w	R617	
100 Ω 1/2w	R607	
120 Ω	R10	
150 Ω	R8,14,15,106,111,173	
180 Ω	R176	
220 Ω	R3,47,48,50,309,608	
240 Ω	R71	
270 Ω	R157,158,203,204	
330 Ω	R93,162	
390 Ω	R49	
430 Ω	R39,40	
470 Ω	R1,7,9,51,65,67,103,108,113,118 130,144,618	
560 Ω	R34,37	
750 Ω	R72,200,201	
820 Ω	R70	
910 Ω	R29,30	
1k Ω	R7,811,12,21,22,31,57,58,62,63, 87,88,124-126,133,137,611,616	
1k Ω 1/2w	R622	
1.8k Ω	R620A,621A	
2.2k Ω	R26	
2.2k Ω 1/4w	R310	
2.7k Ω	R16	
3k Ω	R107,112	
3.3k Ω	R1,82,142,320	
4.7k Ω	R23,24,86,117,148,149,154,155 319	
5.1k Ω	R145	
6.8k Ω	R74	
8.2k Ω	R66	
10k Ω	R2,4,5,17,18,43,68,69,79,80,104 105,300,305,306,312,318,614,615 624	
15k Ω	R38,89,90	
22k Ω	R2,77,83,109,114,119,141,171 314	
27k Ω	R52,131	
27k Ω 1%	R613	
33k Ω 1/4w	R621A	

Description	Ref. No.	Pt.No.
47k Ω	R6,13,25,78,91,92,314,	
100k Ω	R3,6,44,53,64,81,132,143,156	
100k Ω 1/2w	R602,603	
150k Ω	R75	
180k Ω	R	
220 k Ω	R315	
470k Ω	R159	
820k Ω 1/2w	R600	
1M Ω	R45,122,127,128,612	
	Fuse	
2.2 Ω 1/4w	R604	272445
	Wire Wound	
10 Ω 5w	R601	242143
1k Ω 5w	R605	241378
	Capacitors	
	Ceramic	
4.7pF	C51,111	
15pF	C84	
22pF	C5,37,47,61,83	
33pF	C53	
47pF	C52,58	
56pF	C90,105	
82pF	C19	
100pF	C7,59,108,303	
150pF	C4,106	
200pF	C3,10	
270pF	C36	
330pF	C63	
330pF 1kV	C610 ⚠	241381
100pF	C	
0.001µF	C1-3,25,34,98,110,613	
0.001µF !	C602,603,608	
0.0033µF	C27,27,60	
0.0047µF	C104	
0.01µF	C9,30,33,35,38,616	
0.047µF	C20	
0.1µF	C2,12,16,26,39,40,41,56,57,82,85 87,89,100,107,306	
	Electrolytic	
1µF 50V	C31,43,102,103,611,614	
10µF 16V	C6,14,15,22,23,45,48,49,55,64-66 71-80	
10µF 16V np	C1,13,32	
10µF 35V	C113	
68µF 400V	C609	
100µF 10V	C500	
100µF 16V	C18,44,62,93	

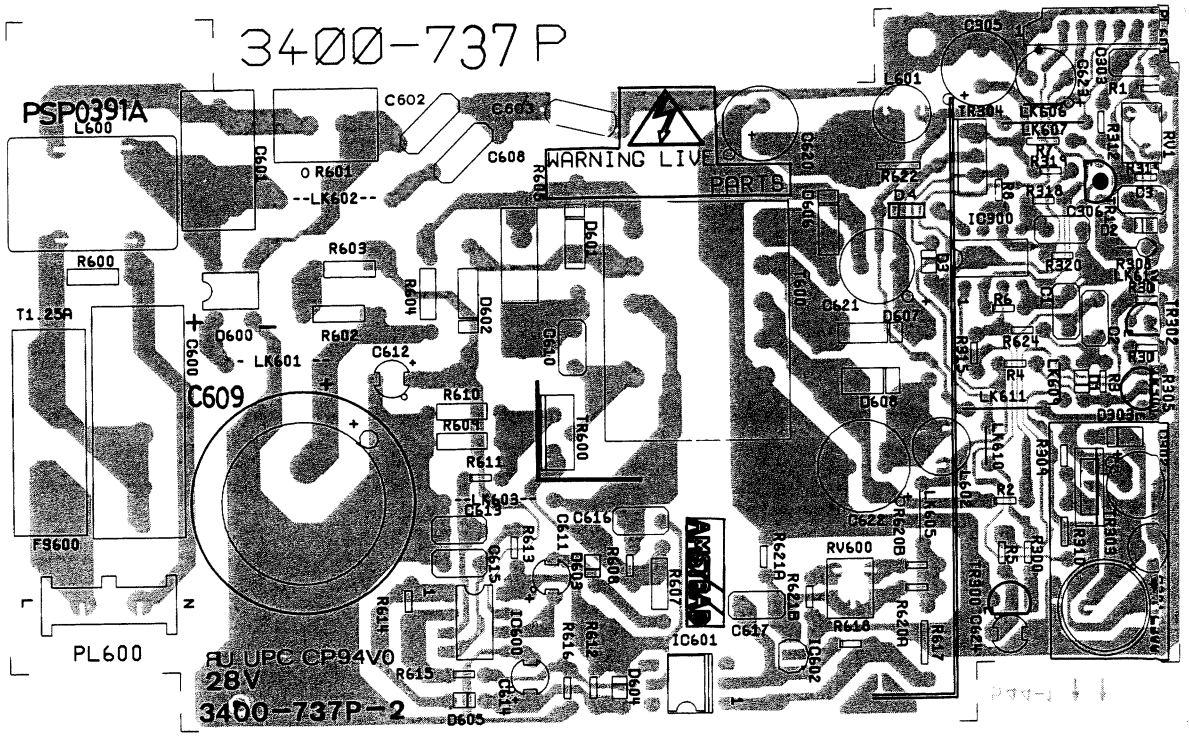
Description	Ref. No.	Pt.No.
100µF 25V	C612	
100µF 50V	C302	
330µF 16V	C622	
330µF 35V	C621	
330µF 50V	C620	
470µF 6.3V	C46	
470µF 10V	C623	
470µF 16V	C305	
	Mylar	
0.082µF	C21,24	
	Polyester	
0.001µF 100v	C8,615	
0.1µF	C11,54	
0.22µF 63V	C617	
0.47µF	C88,94,95	
	Metal Film	
0.1µF	C601	
0.22µF 250V ⚠	C600	

Amstrad reserves the right to supply selective components.

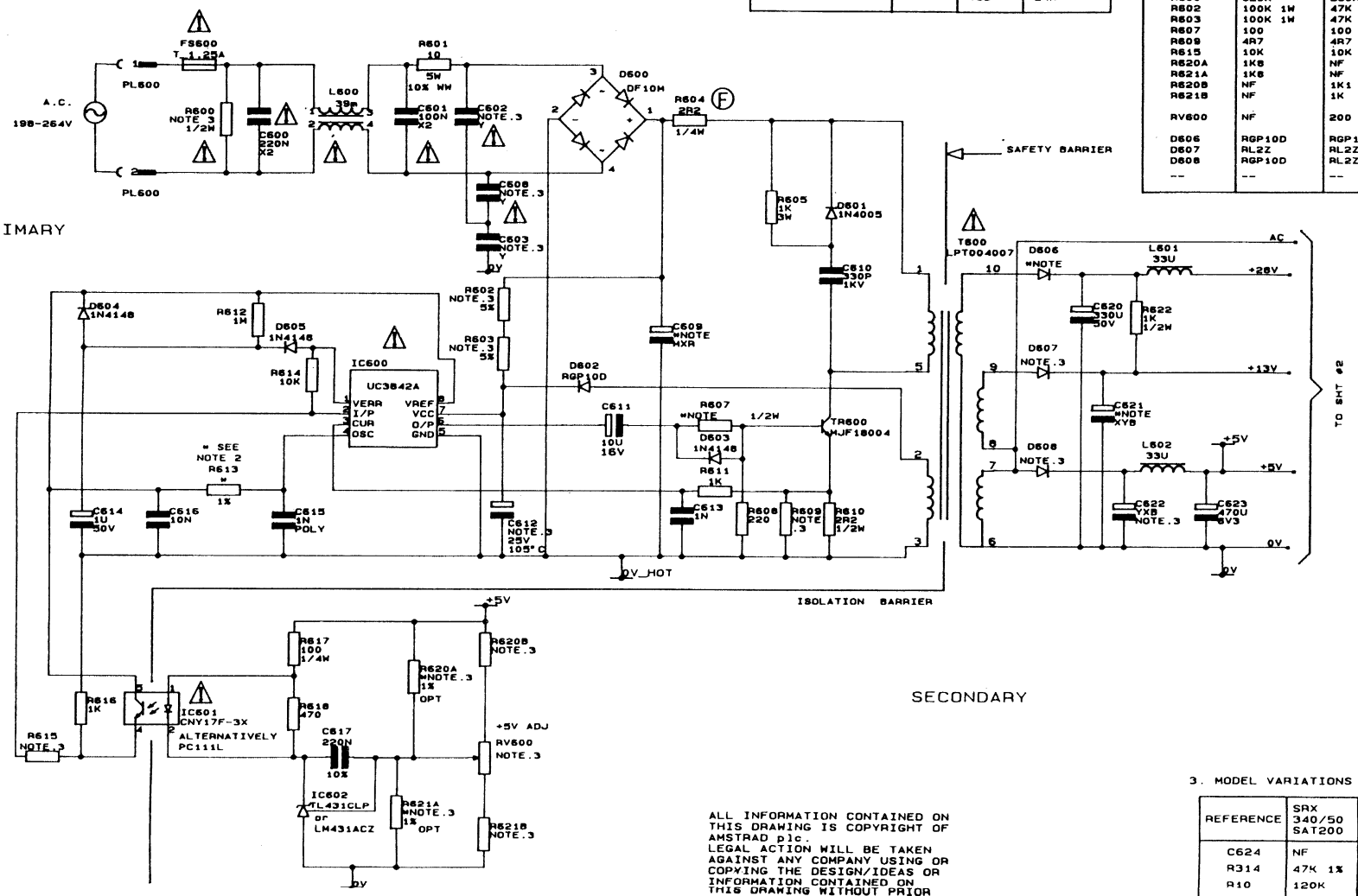
Front Panel PCB Component Layout



P.S.U. PCB Component Layout



Schematic Diagram P.S.U. Main



NOTES: -

1. ⚠ DENOTES SAFETY CRITICAL COMPONENTS

2. * VALUES FOR R613

IC600 SUPPLIER	SRX360	SRD650	ALL OTHER
SGS UC3842	30K	33K	27K
CHERRY CS3842A	30K	33K	27K
MOTOROLA UC3842AN	27K	T8D	24K

3. MODEL VARIATIONS

REFERENCE	SAT200 SRX340/50	SRD540/50	SRX360	SRD650
C602	1N	2N2	1N	1N
C603	1N	2N2	1N	1N
C608	1N	2N2	1N	1N
C609	68U	68U	150U	150U
C612	100U	220U	100U	100U
C621	330U 25V	330U 25V	470U 25V	470U 25V
C622	330U 25V	2200U 6V3	1000U 6V3	2200U 6V3
R600	820K	560K	820K	820K
R602	100K 1W	47K 2W	100K 1W	100K 1W
R603	100K 1W	47K 2W	100K 1W	100K 1W
R607	100	100	56	56
R609	4R7	4R7	4R7	3R9
R615	10K	10K	10K	5K6
R620A	1K8	NF	1K1	NF
R621A	1K8	NF	1K	NF
R620B	NF	1K1	NF	1K1
R621B	NF	1K	NF	1K
RV600	NF	200	NF	200
D606	RGP10D	RGP10D	RL2Z	RL2Z
D607	RL2Z	RL2Z	EK16	EK16
D608	RGP10D	RL2Z	RK33	RK33
--	--	--	--	--

CONTIN. SHT#2

3. MODEL VARIATIONS (CONTIN.)

REFERENCE	SRX 340/50 SAT200	SRD 540/50	SRD 545	SRX360
C624	NF	NF	NF	100N
R314	47K 1%	47K 1%	47K 1%	39K 1%
R10	120K	120K	NF	120K
R11	180K 5%	180K 5%	NF	NF

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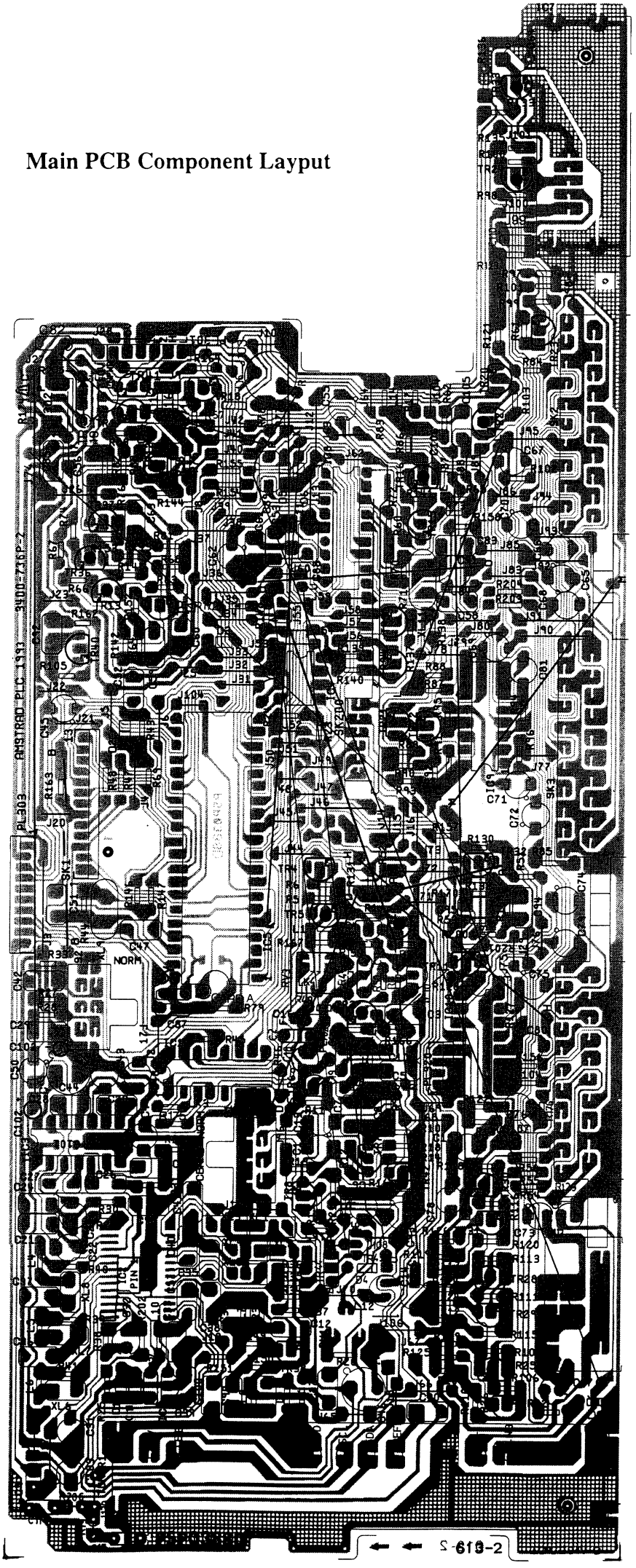
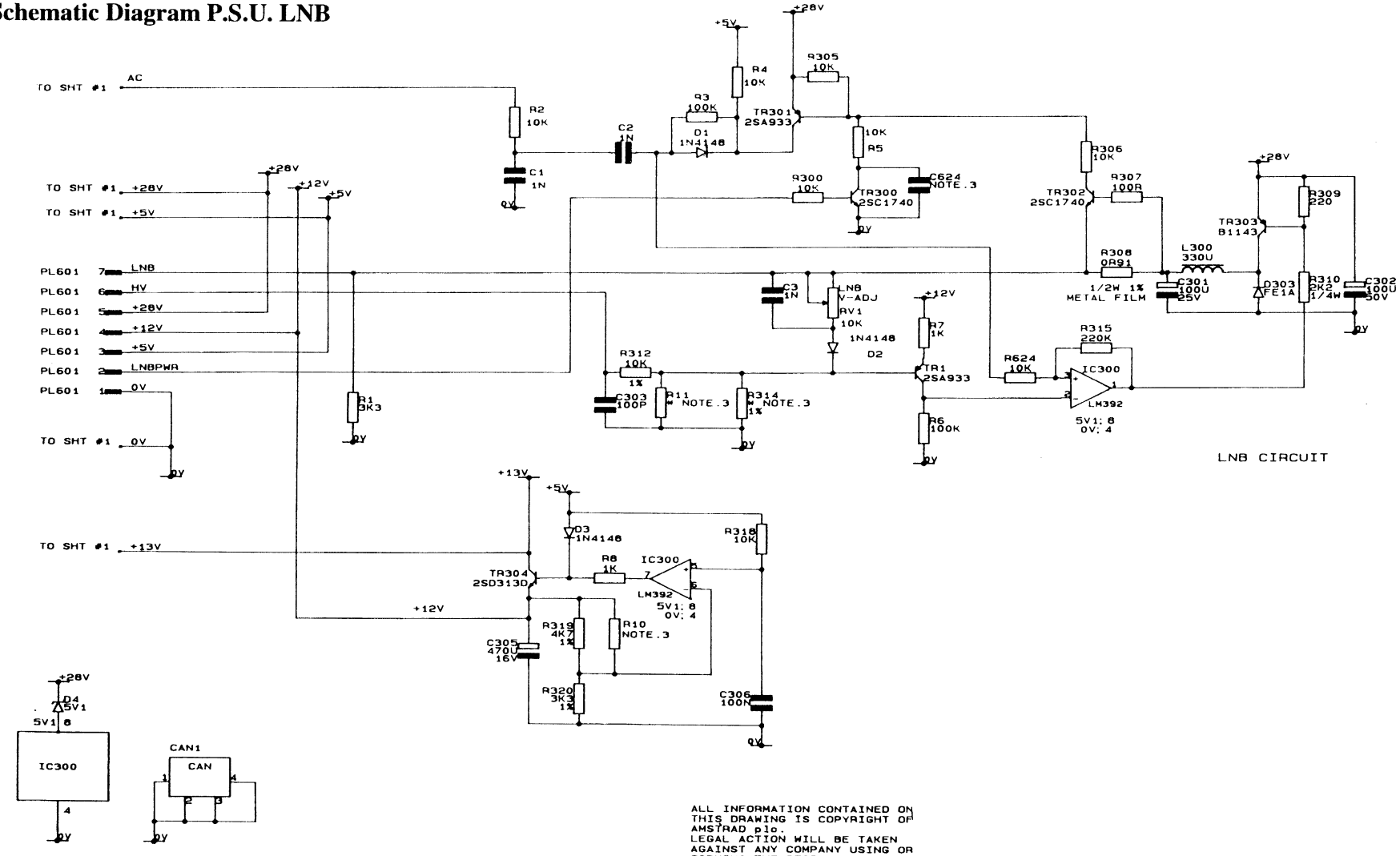
Main PCB Component Layput



Schematic Diagram P.S.U. LNB



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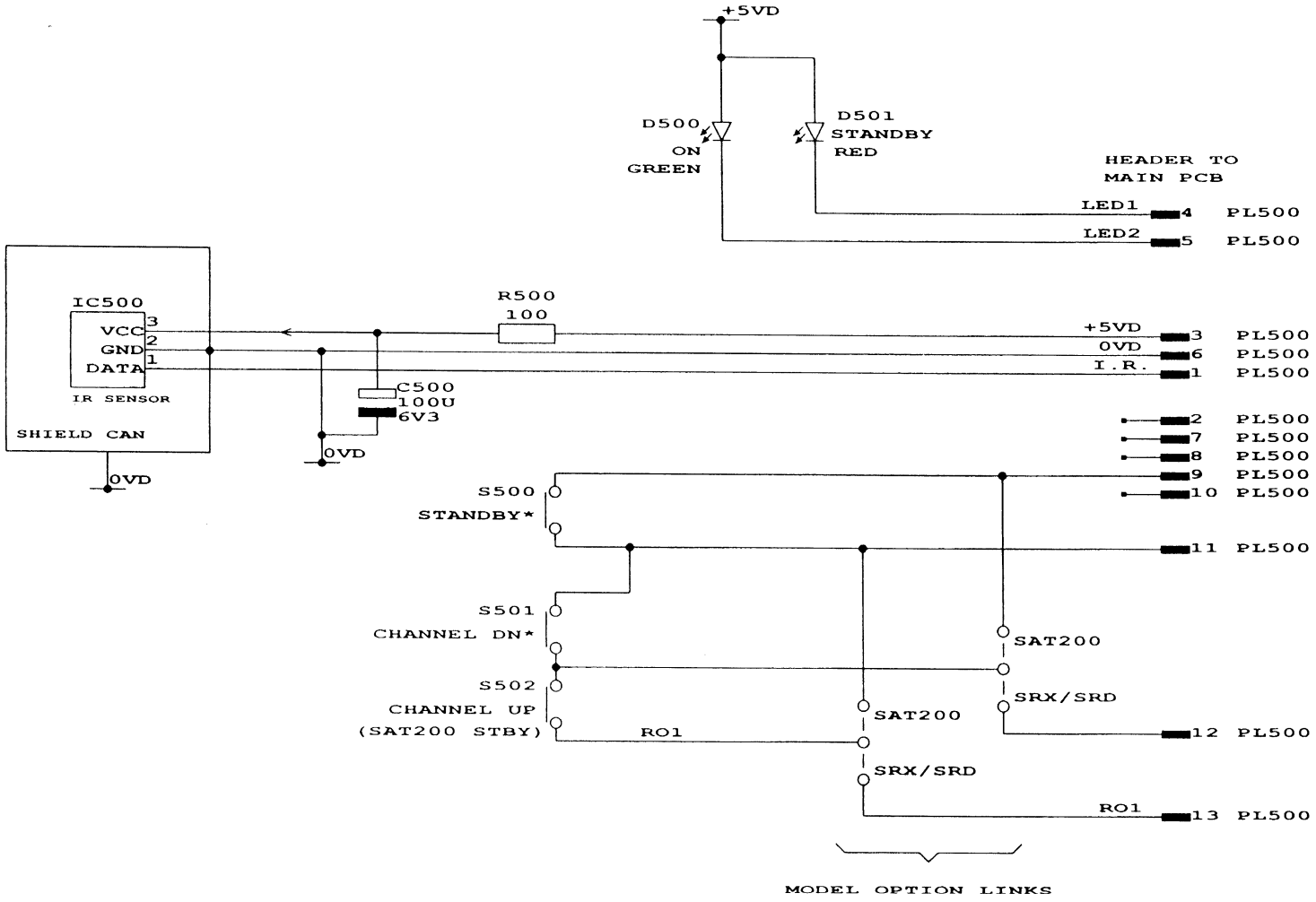
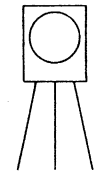
Schematic Diagram Front PCB



NOTES:-

1. +5V (180mA) TOTAL
2. +12V (0mA)
3. * NOT FITTED TO SAT200

SENSOR
SHARP 1SU60L
FRONT VIEW



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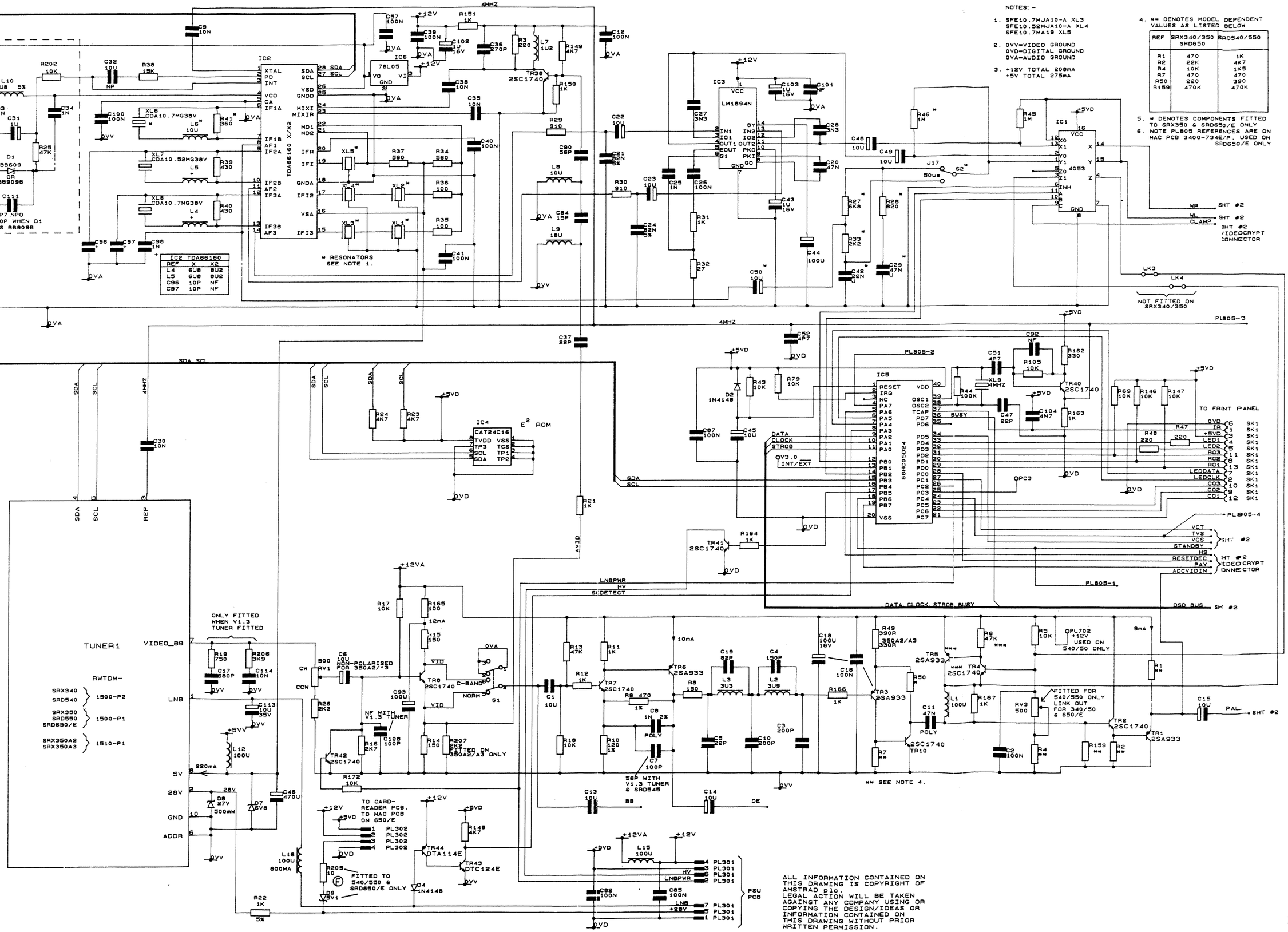
Schematic Diagram Main, Video, Audio & Microprocessor


NOTES: -
1. SFE10.7MJA10-A XL3
SFE10.52MJA10-A XL4
SFE10.7MA19 XL5
2. 0VV=VIDEO GROUND
0VD=DIGITAL GROUND
0VA=AUDIO GROUND
3. +12V TOTAL 208mA
+5V TOTAL 275mA
4. ** DENOTES MODEL DEPENDENT VALUES AS LISTED BELOW
REF | SRX340/350 SRD650 | SRD540/550
R1 | 470 | 1K
R2 | 22K | 4K7
R4 | 10K | 1K5
R7 | 470 | 470
R50 | 220 | 390
R159 | 470K | 470K
5. * DENOTES COMPONENTS FITTED TO SRX350 & SRD650/E ONLY
6. NOTE PL805 REFERENCES ARE ON MAC PCB 3400-734E/P. USED ON SRD650/E ONLY
IC2 TDA6616O
REF X X2
L4 6U8 8U2
L5 6U8 8U2
C96 10P NF
C97 10P NF
* RESONATORS SEE NOTE 1.
** SEE NOTE 4.
TUNER1
RWTDM-
SRX340 SRD540 1500-P2
SRX350 SRD550 SRD650/E 1500-P1
SRX350A2 SRX350A3 1510-P1
ONLY FITTED WHEN V1.3 TUNER FITTED
NON-POLARISED FOR 350A2/3
NF WITH V1.3 TUNER
FITTED ON 350A2/A3 ONLY
56P WITH V1.3 TUNER & SRD545
FITTED TO 540/550 & SRD650/E ONLY
TO CARD-READER PCB. TO MAC PCB ON 650/E
NOT FITTED ON SRX340/350
FITTED FOR 540/550 ONLY LINK OUT FOR 340/50 & 650/E
OPL702 +12V USED ON 540/50 ONLY
TO FRNT PANEL
PL805-1
PL805-2
PL805-3
PL805-4
DATA CLOCK STROB BUSY
OSD BUS
LNBPWR
HV
SLDETECT
AVID
PAL
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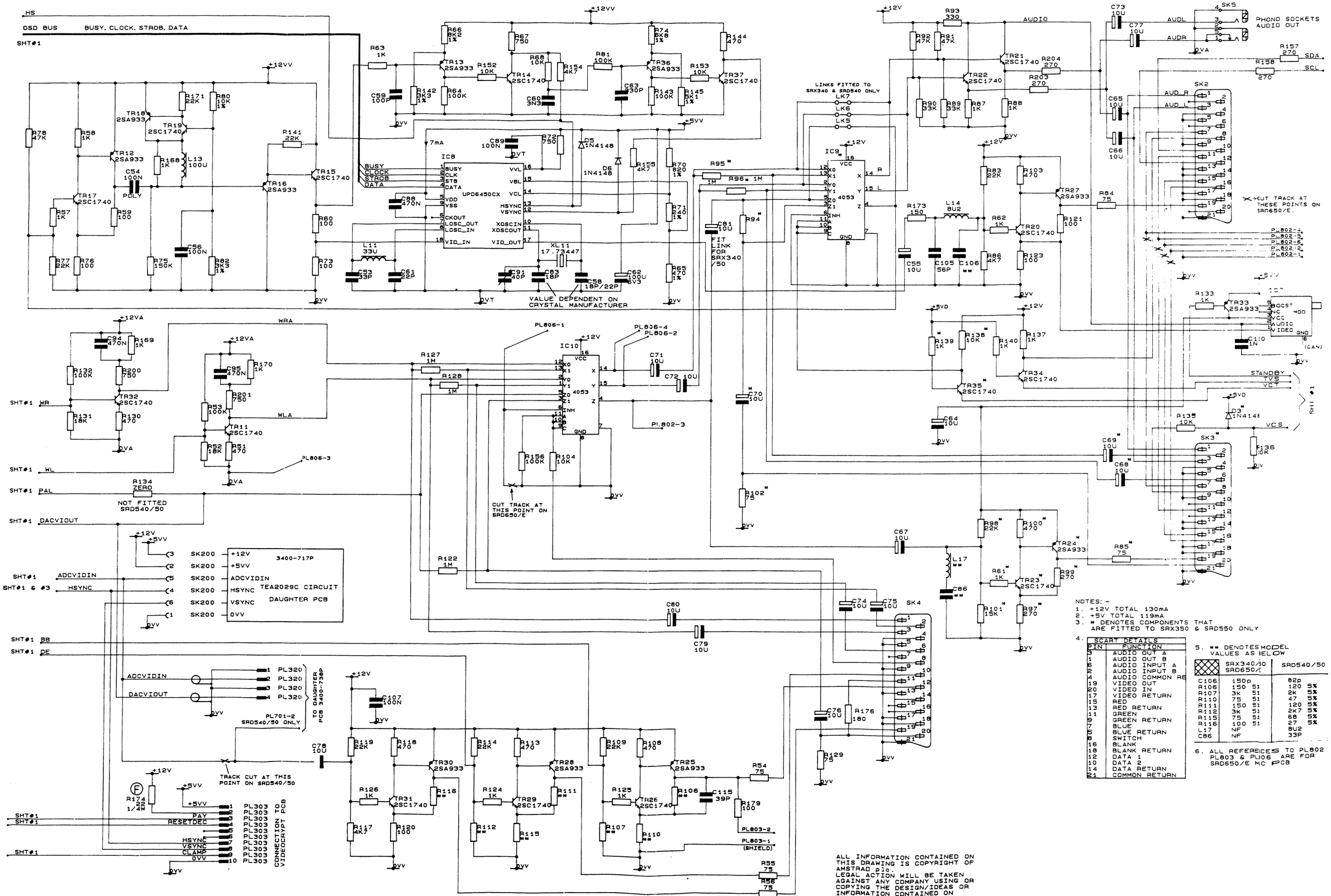
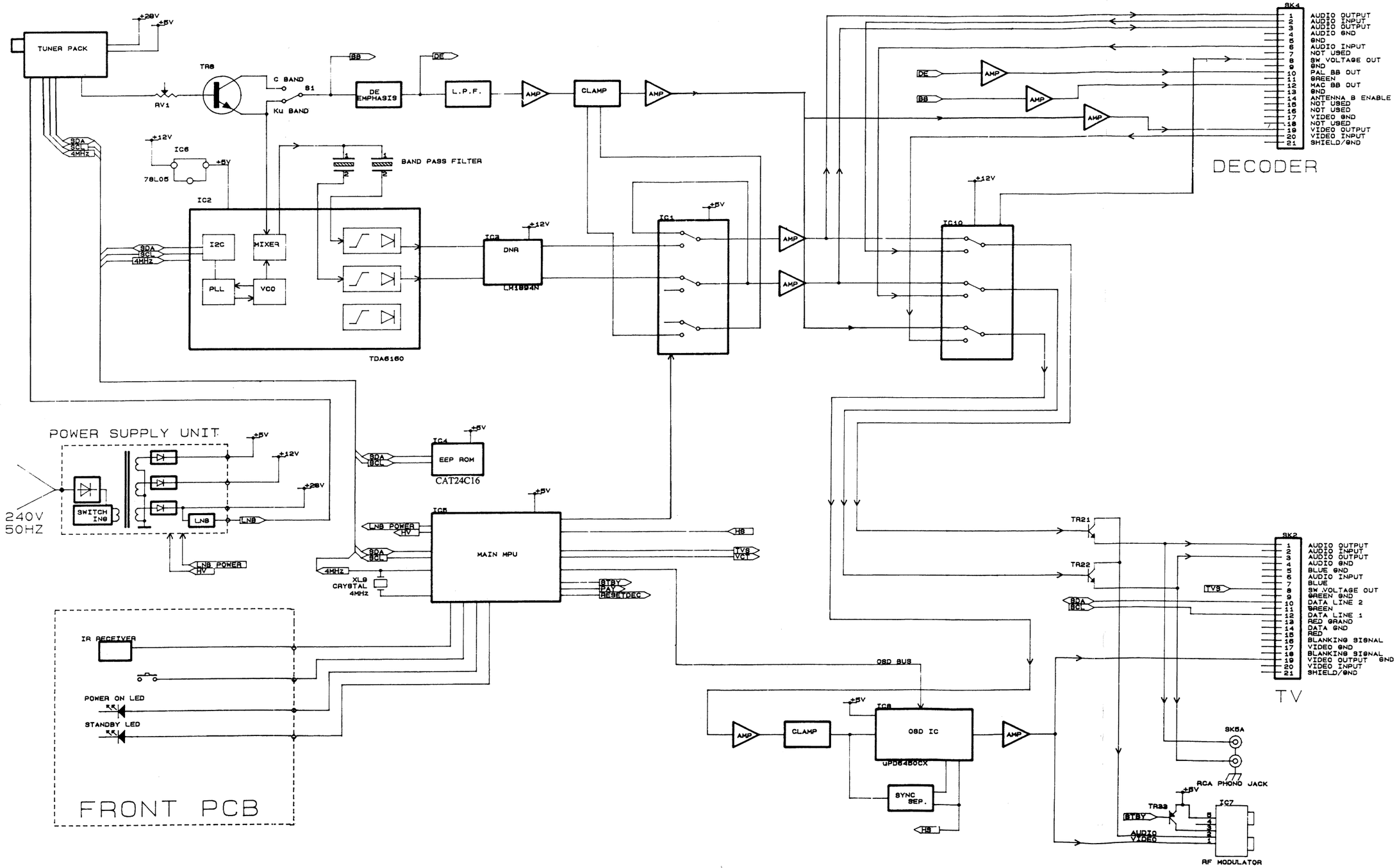
Schematic Diagram Main Output Switching



SRX345 BLOCK DIAGRAM



Test Waveforms

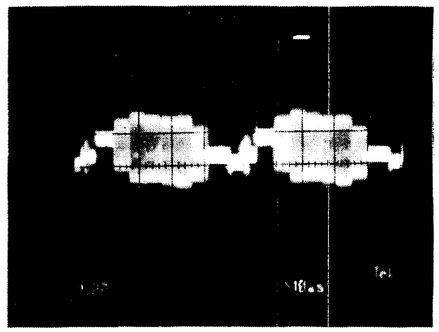


Fig.1 TP Junction of RV1 & R19
Video Baseband

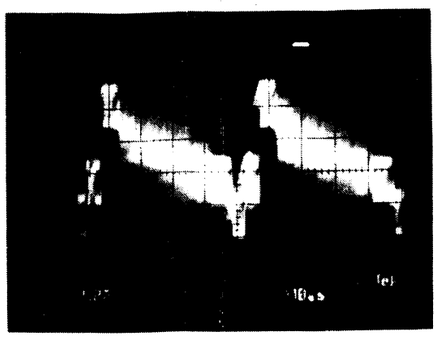


Fig.2 TP TR6 Collector
De Emphasis Video

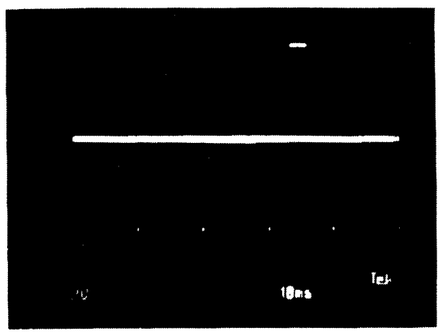


Fig.7 TP D6 5.5Vp-p
VSynch (OSD)

Fig.3 TP TR10 Collector
Sub Carrier Filter

Fig.4 TP Jn of C11 & R167 1.6Vp-p
Clamped (Ed Removed)

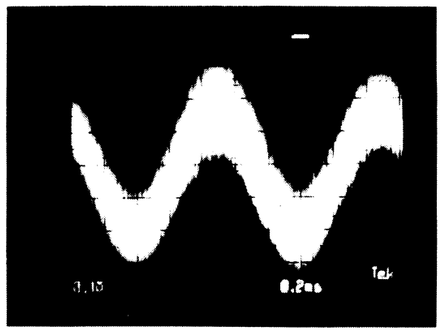


Fig.10 TP Jn R29 & IC2 Pin14
Audio (Left)

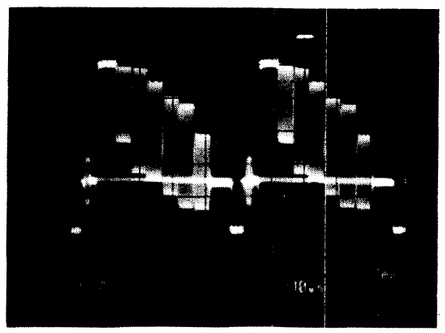


Fig.5 TP TV Scart Pin19 1Vp-p
Video Out

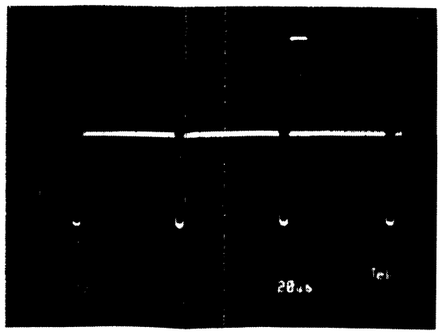


Fig.6 TP D5 5.5Vp-p
HSynch (OSD)

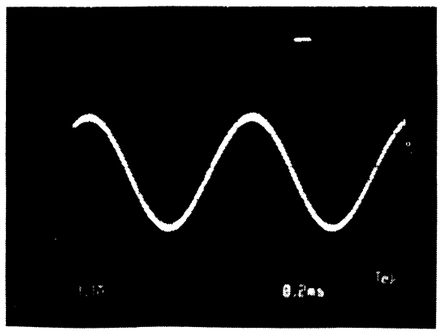


Fig.11 TP Jn R29 & C22
Audio (Left)

VOLTAGE CHARTS

ICs

IC300	LM392
PIN 1	24.96V
2	4.54V
3	7.07V
4	0.021V
5	5.29V
6	5.30V
7	15.31V
8	26.33V
IC500	**74LS164**
PIN 1	3.96V
2	4.05V
3	0.29V
4-6	0.28V
7	0
8	5.07V
9,14	5.06V
10	0.329
11	0.33V
12	0.34V
13	4.06V
IC501	**74LS164**
PIN1,2	5.07V
3,5,6	4.01V
4	4.02V
7	0
8	5.07V
9	5.05V
10,11,13	4.05V
12	4.06V
14	5.06V
IC900	**LM324**
PIN1	0
2	6.49V
3	5.07V
4	26.5V
5	0
6	0.55V
7-14	0
IC901	**74HCT08**
PIN1	0.1V
2,5	4.92V
3,6-8,11	0
4,9,12	0.1V
10,13	0.07V
14	5.05V

IC902	CD4053BE
PIN 1,3,4	0.068V
2,5-8,12	0
9,11	4.96V
10	4.95V
13	4.98V
14	4.97V
15	0.06V
16	5.08V
IC1	**MC14053BCP**
PIN 1	2.23V
2,12,14,15	2.42V
3	2.03V
4,5	1.72V
6-8,10,11	1.72
9	0.46V
13	2.33V
16	5.09V
IC2	**TDA61602X**
PIN 1	0.41V
2	2.51V
3	1.31V
4,26	4.92V
5,8,15,16,18,25	0
6,7,10	2.27V
9,11	2.26V
12,13	2.25V
14,17,19-21	2.32V
22	4.15V
23,24	2.94V
27,28	5.07V
IC3	**LM1894N**
PIN 1	12.78V
2,13	6.3V
3,14	6.32V
4	6.33V
5	5.39V
6	0.74V
8	5.86V
9	1.18V
10	1.28V
11	6.53V
12	6.31V

IC4	24C16
PIN 1-4,7	0
5	5.09V
6	4.01V
8	4.07V
IC5	**68HC0524 CPU**
PIN 1,2,8,10,12	5.09V
15,16,24,29-31	
33,40	
3,7,9,11,13,14	0
17,18,20-23	
25,26,28,34-36	
4	4.94V
5	5.14V
19	5.01V
32	2.98V
37	4.78V
38	2.25V
39	2.27V
IC6	**78L05AC**
PIN 1	12.77V
2	0
3	4.95V

IC8	UPD6450CX-002 OSD
PIN 1,3,9	0
2	4.92V
4,5,10,11	4.92V
6	2.5V
7	2.4V
8	2.36V
12	5.49V
13	5.10V
14	2.29V
15	1.49V
16	2.58V
17	1.74V
18	1.73V
IC9	**MC14053BCP**
PIN 1	2.76V
2,12	3.01V
3	3.9V
4,5	4.1V
6-8	0
9-11	0.12V
13	2.68V
14	2.94V
15	3V
16	12.76V

TRANSISTORS

REF Q/TR	C	B	E
1	12.31V	4.69V	12.82V
6	12.01V	8.02V	1.67V
7	12.02V	2.28V	1.7V
8	9.43V	2.6V	1.94V
12	7.03V	12.03V	12.69V
14	10.37V	0.1V	0
16	0.25V	3.59V	3.55
20	12.07V	2.18V	1.06V
23	4.32V	1.94V	1.34V
24	1.43V	12.04V	12.68V
26	12.02V	1.04V	0.4V
27	3.2V	1.05V	12.68V
28	2.04V	12.04V	12.68V
29	12.05V	1.37V	0.79V
30	1.94V	12.04V	12.68V
31	12.04V	2.16V	1.57V
33	4.96V	4.24V	5.04V
36	0	10.27V	5.41V
37	11.96V	0	0
38	3.74V	0.6V	0
40	3.97V	3.87V	3.23V
42	2.6V	0	0
280	3.4V	0.04V	0

REF	C	B	E
300	3131V	0.12V	0
301	6.15V	31.32V	31.34V
302	31.32V	15.36V	15.29V
900	0	0.3V	0.7V
901	12.69V	0	0.76V
903	6.93V	0.01V	0
904	0.04V	0.22V	0.7V
906	0	0.7	0.7
907	0.7V	0	0
908	1.0V	4.96V	5V
909	1V	4.96V	5.0
910	1V	4.96	5.01
911	0	0	0
912	0	0	0.6V
913	0	0	0
914	0	0	0
915	0.04V	0.68V	0
916	0.01V	0.04V	0.03V
917	5.06V	5.06V	4.38V
918	0.6V	0	0
919	0.01V	0	0.28V
920	0.03V	0	0.56V

NOTE FOR THE ENGINEERS

Please note which type of satellite dish and type of LNB is installed when installing this equipment.

This receiver is factory set for SLB3 or TLB3. To use older type of Amstrad LNB, change receivers local oscillator setting to 10GHz. To do this press set-up repeatedly so installation menu is displayed on the screen. Press select + to change LNB setting to 10.000GHz and then exit.

Reset:
To achieve full factory reset
1): Set in stand by mode
2): Press Ok, Setup and Status buttons in sequence on the handset
3): Hold Setup button pressed down until LEDs on the front panel start to flash.
Now the set is in full reset mode.

Deutsch

TECHNISCHE DATEN

EMPFÄNGER

Abmessungen, Gewicht:	335 x 62 x 250mm (B x H x T), 1,9kg
Stromversorgung:	220-230V/50Hz Wechselstrom
Empfangsfrequenzbereich:	700-2050MHz
Kanalbandbreite:	27MHz
Oszillatorfrequenzbereich:	0 und 9,3-12GHz
Feinabstimmungsbereich:	±10MHz
Dynamikbereich:	-20 bis -60dBm
Schwellenwert:	8dB Störspannungsabstand (mit Schwellenwerterweiterung)
AM-Kanalinterferenzschwelle:	-15dBc (typisch)
RF-Ausgangssignal:	Kanal 38 (einstellbar von Kanal 30-40)
Signal-Rauschabstand S/N: (bezogen auf Basisbandbreite 5MHz für PAL bei C/N=14dB und nominellen Hub s-s des Nutzsignals)	43,5dB
Audio-Zwischenträger:	5,5-8,5MHz
Audio-Ausgangspegel:	2Vs-s bei 50kHz Hub
Frequenzgang:	40Hz-15kHz
Eingangs-/Ausgangsanschlüsse:	LNB 75 Ohm Typ F RF 75 Ohm koaxial (2x) AUDIO OUT RCA-Phonostecker (2x) SCART/PERITEL 21-polig DECODER 21-polig

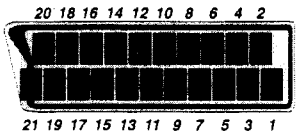
SLB3 LNB

Eingangsfrequenzbereich:	10,70-11,80GHz
Ausgangsfrequenzbereich:	950-2050MHz
Oszillatorfrequenz:	9,75 GHz
Verstärkung:	55dB
Rauschmaß:	1dB typisch
Träger-Rauschabstand C/N:	15 dB
Polarisationsumschaltung:	elektrisch (13/17V)
Ausgangsbuchse:	75 Ohm Typ F

ANTENNE

	SDM60	SDM80
Öffnungswinkel:	3,0	2,4
Gewinn G: bei 11,5GHz	36dB	38dB
Rauschtemperatur Ta: 'Clear Sky' beim 30° Elevationswinkel	75K	65K
G/T-Wert (dB/K): (mit o.g.LNB)	14	16.5

BUCHSEN AN DER GERÄTERÜCKSEITE



TV SCART/PERITEL

1	Audio-Ausgang rechts	11	Grün*
2	Audio-Eingang rechts	12	Serielle Schnittstelle (Uhr) †
3	Audio-Ausgang links	13	Rot/Erde
4	Audio/Erde	14	Serielle Schnittstelle (Erde) †
5	Blau/Erde	15	Rot*
6	Audio-Eingang links	16	Austastsignal*
7	Blau*	17	Video/Erde
8	Externe Schaltspannung	18	Austastsignal/Erde
9	Grün/Erde	19	Video-Ausgang
10	Serielle Schnittstelle (Daten) †	20	Video-Eingang
		21	Abschirmung/Erde

DECODER

1	Audio-Ausgang rechts	12	MAC-Grundband-Ausgang
2	Audio-Eingang rechts	13	Erde
3	Audio-Ausgang links	14	(nicht belegt)
4	Audio/Erde	15	(nicht belegt)
5	Erde	16	(nicht belegt)
6	Audio-Eingang links	17	Video/Erde
7	(nicht belegt)	18	(nicht belegt)
8	Audio/Video INT/EXT	19	PAL-Grundband-Ausgang (gefiltert/geklemmt)
9	Erde	20	Video-Eingang
10	PAL-Grundband-Ausgang (ungefiltert/ungeklemmt)	21	Abschirmung/Erde
11	Grün		

* (nicht belegt)
† (Verwendung nur durch Fachhändler)